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10/756,969

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Peter Skov Christensen

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EXAMINER

TEDOM, CLEMENT N

ART UNIT

PAPER NUMBER

2609

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/756,969

Applicant(s)

CHRISTENSEN ET AL.

Examiner

Clement N. Tedom

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)~
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the cross-reference to related application is missing. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 1,5-9,13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownell et al, PG PUB 2003/0130833, (hereinafter Brownell), in view of Chin et al Patent No 5617421 (hereinafter Chin) in view of applicant admitted prior art.

With respect to claim 1 and 14 and 18

Brownell teaches a locally administered virtual MAC address (which are mapped to an original MAC address as they follow the IEEE 48 bit address format) (see section [0041], lines 1-7).

Brownell further teaches the steps of:

Utilizing a first portion of the virtual MAC address to define a domain for the address (see section [0041], lines 9-10, where the MAC has a field that contains the node ID).

Utilizing a second portion of the virtual MAC address to indicate that the address is a locally administered address (See section [0041], lines 8-9, where a field is used to set the locally administered bit to 1).

Utilizing a third portion of the virtual MAC addresses (see section [0041], lines 11-12, where a third field controlled by the control node, which is a count value, (see section [0041], lines 11-12)

Brownell does not teach explicitly teaches a third portion indicating unit specific use, nor utilizing a fourth portion of the virtual MAC address to indicate an organizationally assigned unit-unique MAC address.

Chin, which is in the same field of endeavor (address management), discloses a mac address with the following entry:

Indication if local or global, the user specific ID, as well as domain identification (see column 13, lines 20-31, as well as column 15, lines 36-49, where Mac address specified each address within a domain, which is substantively the same as user specific ID)

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to indicate user specific ID in a domain in order to keep each address within a domain unique (see column 15, lines 46-49)

Applicant admitted prior art (fig 3 and 4) shows a logically administered Mac address with 4 fields. First field is reserve for a Unit unique MAC address (24 bit), see fig 3 (item 32), a second field reserved for unique identifier (24 bits) (see fig 3, item 31) which is further divided into 3 field: a 6 bits field, and a 2 bits field (see fig 4, item 41) and a remaining 16 bits field.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a third and second field in the virtual MAC address indicating Unique identifier and unit-unique in order to insure uniqueness (see section [0004], lines 8).

With respect to claim 5

Brownell, as modified by Chin and in view of applicant admitted prior art teaches the limitation of claim 1 for the reason above.

Brownell in view of applicant admitted prior art teaches the limitation of claim 5 except for different node assigned different OUI.

Applicant admitted prior teaches each MAC address being assigned an OUI to insure uniqueness (see section [0004], lines 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a each MAC a OUI to insure uniqueness (see section [0004], lines 5).

With respect to claim 8

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Brownell, as modified by Chin and in view of applicant admitted prior art teaches the limitation of claim 1 for the reason above.

Brownell further teaches original MAC address is received by an address mapping function that maps original MAC addresses from Ethernet packets to one of a plurality of assigned locally administered virtual MAC addresses. (See section [0043], where processor Mac address bind with virtual Mac address)

With respect to claim 9

Brownell, as modified by Chin and in view of applicant admitted prior art teaches the limitation of claim 1 for the reason above.

Claim 9 recites the same limitation as claim 1, except for a mapping function, as well as various means carrying out the mapping functions discussed In accordance with 35 USC 112 6th paragraph, all the various means claimed in the instant invention are interpreted according to the disclosure to comprise essentially an address mapping application on a node

Brownell disclose a control node capable of performing the above-mentioned function (see section [0043]).

With respect to claim 13

Brownell, as modified by Chin and in view of applicant admitted prior art teaches the limitation of claim 9 for the reason above.

Claim 13 recites the same limitation as claim 6, except for a database, as well as various means carrying out the functions discussed In accordance with 35 USC 112 6th

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paragraph, all the various means claimed in the instant invention are interpreted according to the disclosure to comprise essentially an database on a node.

Brownell disclose an access node, which have table capable of performing the above-mentioned function (see section [0049]).

With respect to claim 15

Claim 9 recites the same limitation as claim 1, except for a mapping function adapted to perform the function discussed.

Brownell disclose a control node capable of performing the above-mentioned function (see section [0041-0043]).

With respect to claim 16

Brownell, as modified by Chin and in view of applicant admitted prior art teaches the limitation of claim 15 for the reason above.

Brownell further teaches database function adapted to store all assigned locally administered virtual MAC addresses. (See section [0042])

With respect to claim 17

Brownell, as modified by Chin and in view of applicant admitted prior art teaches the limitation of claim 15 for the reason above.

Brownell further teaches a communication function adapted to communicate with an external database that stores all assigned locally administered virtual MAC addresses. (See section [0042], as well as fig 1,item 135)

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2. Claim 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownell as modified by Chin and applicant admitted prior art, further in view of Fujisawa PG PUB 2003/0039260, (hereinafter (Fujisawa)).

With respect to claim 6

Brownell, as modified by Chin and in view of applicant admitted prior art teaches the limitation of claim 1 for the reason above.

Brownell does not teach the limitation of claim 6.

Fujisawa which is in the same field of endeavor (data communication) teaches comparing the unit-unique MAC address against unit-unique MAC addresses that are already used in other nodes; and if the unit-unique MAC address has already been used in another node, defining a new MAC domain for the virtual MAC address (see section [0089]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to compare MAC address to determine if it is already used or not in order to prepare a pseudo Mac address that is not duplicated (se section [0093], lines 6-10)

With respect to claim 7

Brownell, as modified by Chin and applicant admitted prior art, further in view of Fujisawa teaches the limitation of claim 6 for the reason above.

Brownell does not teach the limitation of claim 7

Fujisawa teaches accessing a MAC address database that stores MAC addresses for all nodes in the network. (See section [0089-0091])

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to access in order to keep the CPU from erasing the Mac addresses.

Allowable Subject Matter

3. Claims 2-4, and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clement N. Tedom whose telephone number is (571)270-01827. The examiner can normally be reached on Monday-Friday, 7:30-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on (571)272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CTN

CNT

A handwritten signature in black ink, appearing to read 'CDG', with a long horizontal stroke extending to the right.

CHARLES D. GARBER
SUPERVISORY PATENT EXAMINER